More Reliable Than Fuse and Relay Technology

Compact, Sealed, Robust Enclosure

Enhanced Diagnostics and Protection

Cuts Wire Harness Costs

POWER DISTRIBUTION MODULE FOR INTEGRATED MACHINE AND EQUIPMENT CONTROL

Murphy’s PowerCore Intelligent Xpansion module expands CAN bus control networks by replacing existing relay and fuse boxes with more reliable, solid-state switches that can directly drive work lights, wiper motors, cooling fans, directional DC motors and other high-current loads.

Each of the 12 PDM outputs can switch or proportionally control up to 15 A loads in 2.5 A increments and feature over-current detection and shut-down capability. Outputs are paired to run up to six electric motors with H-bridge direction control. Twelve digital inputs monitor switched battery, ground and floating inputs. Additionally, eight 0-5V analog inputs are available with a 5V sensor supply.

Wiring length is reduced, and harness costs are cut by remotely locating the IX module near loads and signals. Then the I/O is multiplexed using a CAN bus network, which allows engineers to greatly simplify harness design for ease of installation and improved reliability. For applications not requiring a CAN bus control, the inputs can directly trigger outputs without a need for a separate controller.
## PDM SPECIFICATIONS

### HARDWARE

<table>
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<tr>
<th>CONNECTORS</th>
<th>Deutsch (3) DT series, DTP series, and DT HD series</th>
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### COMMUNICATION

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<th>CAN</th>
<th>CAN 2.0B Active, Default protocol SAE J1939, Baud rate 250 Kbit</th>
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### ELECTRICAL

#### OPERATING VOLTAGE

12V – 24V systems (8-32 V) Reverse Polarity Protection

#### INPUTS

- (12) digital state (high side, low side, open)
- (6) analog (0 - 5 VDC), (2) analog (resistive)

#### OUTPUTS

- (12) Digital High current (15 A each/70 A total configurable as High-side, PWM or up to 6 H-bridge pairs)

### ENVIRONMENTAL

#### OPERATING TEMPERATURE

-40° to +185°F (-40° to +85°C)

#### STORAGE TEMPERATURE

-40° to +275°F (-40° to +135°C)

#### PROTECTION

IP66 and 67, SAE J1455 4.5.3 (10,300 kPa @ 50° C and 100 mm away for 15 min)

#### VIBRATION

5-25 g, 50-2000 Hz, 72 hrs per axis

#### SHOCK

30 g, 3 cycles

#### HOUSING

Internally potted, combination PBT and E-coated cast aluminum with integrated mounting feet

#### RADIATED IMMUNITY

Tri-plate test 100 V/M 10 KHz – 1 GHz

### DIMENSIONS

- Width: 5.40 in. (137 mm)
- Height: 1.913 in. (48.6 mm)
- Length: 9.64 in. (245 mm)

### WEIGHT

2 lb. (90 gram)

**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer. For more information, go to www.P65Warnings.ca.gov